TAVR: Who’s the wrong candidate?

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Surgical risk is an outdated measure of a patient’s eligibility for aortic valve replacement procedures, one Norfolk, Virginia, cardiologist said at the American College of Cardiology’s annual symposium last weekend—clinicians should instead be turning their attention to the idea of “TAVR suitability.”

With the growing capabilities of TAVR, Paul D. Mahoney, MD, said, the concept of recommending a patient for TAVR over SAVR based on perceived surgical risk is almost obsolete. While TAVR was first used in high surgical risk patients with few options, the non-invasive aortic stenosis (AS) treatment is now a safe and effective option for patients across broad risk categories.

Looking at the future of aortic valve replacement, Mahoney said, clinicians are faced with the question of whether TAVR should be the preferred treatment path for all AS patients, regardless of their surgical risk.

“The concept of surgical risk is outdated,” he said. “You don’t draft a quarterback based on their free throw percentage.”

Instead, Mahoney said, doctors should shift their focus to TAVR suitability—the concept that instead of considering surgical risk when referring a patient for a certain procedure, clinicians should zone in on a host of other patient-specific factors to ensure optimal, individualized treatment.

Patients with percutaneous femoral access, an acceptable aortic valvar complex and calcific aortic stenosis tend to do better with TAVR than SAVR, Mahoney explained, but those patients should also avoid the former treatment if they present with comorbidities like severe coronary artery disease, multi-valve disease or extreme aorta pathologies. Some bicuspid valves—particularly those with calcified raphe or an unfavorable calcium pattern—make for an unsuitable TAVR candidate, as does unfavorable valve morphology, left main disease or concomitant surgical CAD.

Anatomy matters in each case. If a patient’s anatomy predisposes them to a higher risk of paravalvular leaks, for example, that patient should likely take a surgical AVR route if they’re at a low surgical risk. Age and durability could be significant contributors to a clinical decision, but Mahoney said researchers need more extensive data on transcatheter heart valve durability before anyone can make a scientific statement.
So even if a patient is at low surgical risk for SAVR, that doesn’t mean TAVR is out of the running, Mahoney said. What needs to be considered in that case—other than the obvious risk of going under the knife—is any feature that makes TAVR a less suitable path for that patient, including bicuspid valves, low coronary heights and aortic root anatomy that has less favorable outcomes with TAVR.

“Expected patient survival and future options for repeat procedures should be integrated into recommendations,” Mahoney said. “SAVR versus TAVR decision process in low risk patients should include assessment of surgical risk, TAVR suitability, patient-specific factors and patient preferences for individualized decision-making for optimal clinical results.”